

GOLIGORSKIY, S.D.; ANESTIADE, N.Kh.; KUKIN, N.N., professor, direktor.

Empyema of the stump of the ureter. Klin.med. 31 no.3:87 Mr '53.
(MLRA 6:5)

1. Fakul'tetskaya khirurgicheskaya klinika Kishinevskogo meditsinskogo in-
stitutu na baze Respublikanskoy klinicheskoy bol'nitsy.
(Ureters--Diseases) (Empyema)

GOLIGORSKIY, S.D. (Kishinev); TSEBYRNE, K.A. (Kishinev); SHOYKEET, R.N.
(Kishinev)

Treatment of acute nonspecific cystitis with presacral novocaine-
penicillin blocks. Klin.med. 32 no.1:84 Ja 1954. (MLRA 7:4)

1. Iz fakul'tetskoy khirurgicheskoy kliniki (direktor - professor
N.N.Kukin) Kishinevskogo meditsinskogo instituta i Respublikanskoy
klinicheskoy bol'nitsy.

(Bladder--Inflammation) (Penicillin)
(Novocaine)

GOLIGORSKIY, S.D., kandidat meditsinskikh nauk; BARDIYER, L.G.

Michelson's vesico-sigmoid anastomosis in total epispadias.
Urologia no.2:78-79 Ap-Je '55. (MLRA 8:10)

1. Iz gosptal'noy khirurgicheskoy kliniki (zav.--prof.
P.V.Ryzhov) Kishinevskogo meditsinskogo instituta na base
Respublikanskoy klinicheskoy bol'nitsy (glavnyy vrach
M.G.Zagarskiy)
(EPISPADIAS, surgery,
vesico-sigmoid anastomosis)

RYZHOV, R.V.; GOLIGORSKIY, S.D.

[Emergency surgery in adults and the aged; clinical practice and treatment] Neotlozhnaia khirurgicheskaiia pomoshch' v pozhilom i starchykh vozraste; klinika i lechenie. Kishinev, Gos. izd-vo Moldavii, 1956. 144 p. (MIRA 10:11)
(SURGERY)

GOLIGORSKIY, S.D.

[Semiology and diagnosis in urology] Ocherki urologicheskoi semiotiki
i diagnostiki. Kishinev, Gos. izd-vo Moldavii, 1956. 242 p.(MLRA 9:11)
(URINARY ORGANS--DISEASES)

~~GOLIGORSKIY, S.D.~~

[Studies in urological semiotics and diagnostics] Ocherki urologicheskoy semiotiki i diagnostiki. 2 izd. dop. Kishinev, Gos. izd-vo Moldavii, 1956. 251 p. (MLDA 10:2)
(GENITOURINARY ORGANS--DISEASES)

EXCERPTA MEDICA Sec 9 Vol 13/2 Surgery Feb 59

1312. ON THE USE OF ENTEROPLASTY IN UROLOGY (Russian text) - Goll-
gersky S. D. - EKSPER. KHIR. 1957, 5 (55-58) Illus. 2
The results obtained in experiments on dogs showed that cystoplasty with the aid of
an isolated small bowel loop gives a well functioning organ, does not lead to acid-
osis, causes no untoward changes in the upper urinary tract and is not complicated
by renal insufficiency.

1312

GOLIGERSKIY, S.D.; ZUSMANOVICH, F.M.

Synthomycin in the treatment of urological diseases. Sov. med. 21
Supplement:25 '57. (MIRA 11:2)

1. Iz gosspital'noy khirurgicheskoy kliniki Kishenevskogo meditsin-
skogo instituta.
(CHLOROMYCETIN) (URINARY ORGANS--DISEASES)

GOLIGORSKIY, S.D., kandidat meditsinskikh nauk (Kishinev)

Enteroplasty in urology; review of foreign literature. Urologiia
22 no.2:62-68 Mr-Apr '57. (MLRA 10:7)

(URINARY TRACT, surg.

plastic replacement with intestinal segments, review (Rus))

(INTESTINES, transplantation,

in urinary tract surg., review (Rus))

GOLIGORSKIY, S.D.

GOLIGORSKIY, S.D.

"Diagnostic puncture of the epididymis" [in Rumanian] by T.Burghela,
H.Joachim, D.Bocancesa. Reviewed by S.D.Goligorski. Urologia 22
no.2:81-82 Mr-Apr '57. (MIRA 10:7)
(TESTICLE--DISEASES)

GOLIGORSKIY, S.D.

[Cystitis] TSistity. Kishinev, Gosh. izd-vo Moldavii, 1958.
173 p. (MIRA 11:4)
(BLADDER--DISEASES)

EXCERPTA MEDICA Sec 9 Vol 13/4 Surgery Apr 59

2084. INTESTINAL GRAFTS IN UROLOGY (Russian text) - Golgorak, S.D. -
EESPER, KHHR, 1956, 2 (31-34)

In experiments on 10 dogs defects in the bladder wall were closed by means of a spread-out short loop of small intestine, with its mesentery left intact. In some experiments the whole graft was used, in others the mucosal layer was removed, and in 5 dogs all layers had been removed except the serosa. Four dogs died: 2 from intestinal obstruction and 1 from peritonitis as a result of purulent cystitis and pericystitis. The 6 surviving dogs had normal blood urea and chlorides, and showed no evidence of hyperchloraemic acidosis. When all layers in the graft except the serosa are removed, the grafted tissue becomes covered by epithelium of a transitory type.

GOLITSORSKIY, S.D., kand.med.nauk (Kishinev)

Etiopathogenesis of urolithiasis. Urologiya 23 no.3:67-73 My-Je
'58 (MIRA 11:6)

(URINARY TRACT, calculi
etiopathogen., review (Rus))

GOLIGORSKIY, S.D.

Bending of the urethra in the treatment of urinary incontinence.
Urlogiia 23 no.4:45-48 J1-Ag '58 (MIRA 11:8)

1. Iz urologicheskogo otdeleniya Respublikanskoy klinicheskoy bol'nitsy, bazy gosspital'noy khirurgicheskoy kliniki (zav. prof. P.V. Ryzhov) Kishinevskogo meditsinskogo instituta.

(URINATION DISORDERS,

incontinence in epispadias, surg., creation of urethral torsion (Ger)

(EPISPADIAS, compl.

urinary incontinence, surg. bending of urethra (Rus))

(URINATION DISORDERS, etiol. & pathogen.

incontinence in epispadias, surg. bending of urethra (Rus))

GOLIGORSKIY, S.D.

Treatment of patients with contracture of the urinary bladder
by intestinal plastic surgery. Urologia 23 no.5:9-13 S-O '58
(MIRA 11:11)

1. Iz Respublikanskoy klinicheskoy bol'nitsy Kishineva
(glavnyy vrach Yu.B. Kasperskiy, nauchnyy rukovoditeli - prof.
A.Ya. Pytel' i prof. P.V. Ryzhov).

(BLADDER, diseases

contracture, surg. substitute bladder from intestinal
segment (Rus))

(INTESTINES, surgery

substitute bladder form. from intestinal segment
in contracture of bladder (Rus))

GOLIGORSKIY, S.D.

Acute renal insufficiency in alcoholic intoxication (form
"Medicina interna" [Rumanina], 1958, no.3). Urologia 23 no.5:
89-89 S-O '58 (MIRA 11:11)
(ALCOHOL--PHYSIOLOGICAL EFFECT)
(KIDNEYS--DISEASES)

GOLIGORSKIY, S.D.

Surgery of the adrenal glands (from "Chinese Medical Journal,"
1956, 76, no.2). Urologia 23 no.2:22-23 S-O 198 (NIEA 11:11)
(ADRENAL GLANDS--SURGERY)

GOLIGORSKIY, S.D.

Genital injuries from gynecological surgery and their treatment
(from "Chirurgia" [Rumanian], 1958, no.2). Urologia 23 no.5
93-94 S-O '58 (MIRA 11:11)
(GENITAL ORGANS, FEMALES--WOUNDS AND INJURIES)

GOLIGORSKIY, S.D., kand. med. nauk (Kishinev).

"Emergency urological treatment in[Rumanian] by T. Burghale and others.

Reviewed by S.D. Goligorskii. Urologia 23 no.6:75-78 N-D '58.

(UROLOGY)

(HRA 11:12)

SOSONIN, Z.S., GOLIGORSKIY, S.D.

In memory of Professor S.M. Rubashov, honored scientist.
Khirurgiia 34 no.4:155-156 Ap '58 (MIRA 11:?)
(RUBASHOV, SAVELII MIRONOVICH, 1883-1957)

GOLIGORSKIY, Solomon Davidovich

[Small urinary bladder; problems in intestinal plastic surgery]
Malyi mochevoi puzyr'; voprosy intestinal'noi plastiki. Kishinev,
Kartia Moldoveniaks, 1959. 145 p. (MIRA 13:12)
(BLADDER--SURGERY)

GOLIGROSKIY, S.D., kand.med.nauk (Kishinev)

Review of "Surgical gynecology" [in Rumanian] by R. Sirbu and others.
Urologia 24 no.2:80-81 Mr-Apr '59. (MIRA 12:12)
(GYNECLOGY, OPERATIVE) (SIRBU, R.)

GOLIGORSKIY, S.D. (Kishinev)

Reply to A.N. Krapivnitskii's criticism of our article on "Treatment
of contracture of the bladder by intestinal transplants." Urologiya
24 no.3:50-51 My-Je '59. (MIRA 12:12)
(BLADDER--DISEASES) (INTESTINES--TRANSPLANTATION)
(KRAPIVNITSKII, A.N.)

RYZHOV, P.V.; GOLIGORSKIY, S.D.; SHOYMER, A., red.; TEL'PIS, V., tekhn .
red.

[Mistakes in preoperational diagnosis; problems in surgical
tactics] Oshibki predoperatsionnogo diagnosa; voprosy khirurgi-
cheskoi taktiki. Kishinev, Gos. izd-vo "Karta Moldoveniaske,"
1960. 181 p. (NIRA 14:5)
(ABDOMEN--SURGERY) (PRIMARY ORGANS--DISEASES)

GOLIGORSKIY, S.D.

"Pyelonephritic refluxes and their clinical importance" by
A.IA. Pytel'. Reviewed by S.D. Goligorski. Sov. med. 24
no. 10:155-156 Q '60. (MIRA 13:12)
(KIDNEYS—DISEASES) (PYTEL', A.IA.)

GOLIGORSKIY, S.D.; KATSYF, A.M.

Organ-preserving operations in disorders of the patency of the
pyeloureteral segment. Urologiia 26 no.1:29-37 '61. (MIRA 14:3)
(KIDNEYS--SURGERY)

ITYEL', Anton Yakovlevich, prof.; GOLIGORSKIY, Solomon Davidovich,
kand.med.nauk; VOROBISOV, V.I., red.; ZUREVA, N.K., tekhn.red.

[Pyelonephritis] Pielonefrit. Moskva, Medgiz, 1961. 200 p.
(MIRA 15:7)

(KIDNEYS--DISEASES)

GOLIGORSKIY, S.D., kand.med.nauk (Kishinev)

"Acute renal insufficiency" by Gh. Olanescu, L. Geogrescu
and M. Dimitriu. Reviewed by S.D. Goligorskiy. Urologia
25 no.1:81-82 Ja-F '60. (MHA 15:6)
(RENAL INSUFFICIENCY)
(OLANESCU, Gh.) (GEOGRESU, L.) (DIMITRIU, M.)

GOLEGORSKIY, S.D.; PYTEL', A.Ya.; SICHKOV, I.P.; SHENKAL-SHAKH, V.I.;
KLEBINSKIY, V.S.; REBED', N.Ya.; YAKUBOV, S.D.; YAKUBOV, I.M.

Reports. Urologia 88 no.1:83-83 Ja-N 1960. (MED 1146)
(UROLOGY-ABSTRACTS)

PYTEL', A.Ya., prof.; GOLIGORSKIY, S.D., doktor med. nauk; DZHAVAD-
ZADE, M.D., kand. med. nauk; LOFATNIK, N.A., doktor med. nauk;
GOL'DIN, G.I., red.; POGOSHIYA, M.V., tekhn. red.

[Artificial kidney and its clinical use] Iskusstvennaya pochka
i ee klinicheskoe primeneniye. Pod red. i s predisl. A.IA.Pytelia.
Moskva, Medgiz, 1961. 291 p. (MIRA 15:10)
(KIDNEYS, ARTIFICIAL)

PYTEL', A.Ya., prof.; GOLIGORSKIY, S.D., doktor med.nauk

Urgent problems in nephrology. Urologiia no.1:6-15 '62. (MIRA 15:11)

(KIDNEYS—DISEASES)

PYTEL', A. Ya., prof. (Medica); GOLITSKIY, S.D., doctor med. nauk (Medica)

Prevention of urinary calculi and so-called uric acid diathesis.
Klin. med. 46 no.11:7-14 N'62 (MIRA 16:12)

FYTEL', Anton Yakovlevich; GOLIGORSKIY, Solomon Davidovich;
SHOYMER, A., red.; SHEKHMER, D., tekhn. red.

[Acute renal insufficiency] Ostraia pचेचनाia nedo-
statoclnost'. Kishinev, Kartia moldoveniaske, 1963.
250 p. (MIRA 17:3)

GOLICORSKIY, S.D.

Present status and tasks of underground services in Moldavia.
Zbirayecheniye (no.5:3-6 S-0103) (MIRA 16:11)

1. Glavnyy urloz Ministerstva upravleniya Moldavskoy SSR

GOLIGORSKIY, S.D.

Some problems of resuscitation in urology and nephrology. Zha-
vookhraneniye 6 no.5:24-28 S-0163 (MIRA 19612)

1. In urologicheskoy klinike (rav. - dokt. med. nauk S.D.
Goligorskiy) Kishinevskogo meditsinskogo instituta.

PYTEL', A.Ya.; GOLIGORSKIY, S.D.; VASIL'YEV, V.V.; KUCHENSKIY, I.M.; NISENBAUM,
L.I.; CHEBANYUK, G.M.; BOGDANOVICH, I.A.; PLISAN, S.O.; SURIS, A.S.

Achievements of contemporary nephrology. Kidneys and ureters.
Urinary bladder. Urologia 28 no.3:82-92 '63 (MIRA 17:2)

PYTEL', A.Ya., prof.; GOLIGORSKIY, S.D., doktor med. nauk

Physiochemical combine: liver-kidneys. Nauka i zhizn' 30 no.6:
30-32 Je '63. (MIRA 16:7)

(LIVER) (KIDNEYS)

RYTEL', A.Tel. prof. (Moskva) GOLICORNIK, D.D., doktor med.nauk (Kishinev)

New data on the study of acute renal insufficiency. Urologia
28 no.2:66-74, Mr-Apr'63. (MIRA 16:6)
(RENAL INSUFFICIENCY)

GOVERNMENT OF THE DISTRICT OF COLUMBIA, D.C.

[illegible]

KUCHINSKIY, I.N.; PYTEL', A.Ya.; ZISMAN, I.F.; GOLICORSKIY, S.D.; CHEBANZUK,
G.M.; ZALEVSKIY, R.O.; RYABINSKIY, V.S.; DARENKOV, A.P.;
KHATAVNER, A.I.; SMELOVSKIY, V.P.; BALTER, M.A.

Abstracts. General problems in urology. Urinary bladder.
Urologiya 28 no.5:87-95 S-0'63 (MIRA 17:4)

FYTEL', A.Ya.; GOLIGORSKIY, G.D.

Water-electrolytic disorders of metabolism in urological diseases. Urologiya 29 no.1.3-11 1984. (MIRA 1984)

1. Urologicheskaya klinika (nav. i diagnost. A.Ya. FYTEL', II
Moskovskogo meditsinskogo instituta imeni N.I. Pirogova i Urologi-
cheskaya klinika (nav. i diagnost. G.D. GOLIGORSKIY)
Kishinevskogo meditsinskogo instituta.

GOLIGORSKIY, S.D.

Some problems of acute and chronic renal insufficiency. Trudy
Kish. gos. med. inst. 2435-22 '64 (MIRA 1831)

Some conclusions from the experience in corrective and plastic
surgery on kidneys and the upper urinary tract. Ibid. 1206-208

PYTEL', A.Ya., GOLIGORSKIY, S.D.

Main results of the Second International Congress of Nephrologists,
Urologia, 29 no.2:67-73 Mr-Apr '64, (MIRA 18:7)

GOLIGORSKIY, S.D., prof. (Kishinev); KATSYF, A.M., kand. med. nauk
(Kishinev)

Review of M.D. Dzhavad-zade's monograph "Polycystosis of the
kidneys; clinical aspects and treatment." Vest. khir. 93 no.11:
140-142 N '64. (MIRA 13:6)

GOLLOMAN, S.D.; SHOTEN, A., ed.

[Studies on urological seriotics and diagnosis; *urologi-
cheskie seriotiki i diagnostika*. Izd. 1., 41 p.
Kishinev, Karla moldoveniaske, 1965. 222 p.
(MIRA 18:1)

PYTEL', A.Ya., prof. (Moskva); GOLIGORSKIY, S.D., prof. (Kishinev)

Acute renal insufficiency in surgical practice. Vest. khir.
no. 6:66-75 '65. (MIRA 18:12)

1. Chlen-korrespondent AMN SSSR (for Pytel').

TYAPKIN, K.F. Prinimali uchastiye: GOLIK, A.I., inzh.; KHARCHENKO, S.I.,
inzh.; FILIPPOVA, I.S., inzh.; BORUSHEVO, T.I., red.izd-vo; IVANOVA,
A.G., tekhn. red.

[Interpretation of gravity anomalies caused by finite geologic
structures along the strike] Interpretatsiya gravitatsionnykh
anomalii, obuslovlennykh konechnymi po prostiraniiu geologiches-
kimi ob"ektami. Moskva, Gos. nauchno-tekhn. izd-vo lit-ry po geol.
i okhrane nedr. Pt.1. 1961. 78 p. (MIRA L:11)
(Gravity prospecting)

TYAPKIN, K.F.; GOLIK, A.I.; KHARCHENKO, S.P.

Interpretation of gravity anomalies under conditions of block structure of the objects being studied. Geofiz. sbor. no.4:80-100 '63. (MIRA 16:9)

1. Dnepropetrovskiy gornyy institut imeni Arterna.

SHADERKOV, P. I., inzh.; GOLIK, A. I., inzh.; BACHEVSKIY, P. S., inzh.

Construction of the Central Siberia Main Transp. syst. 15
no. 3-5-8 Mr 103. MIRA 1964

(Siberia--Railroads--Construction)

GOLIKOV, A.N., doktor veterin. nauk; SHITOV, S.T., kand. veterin. nauk

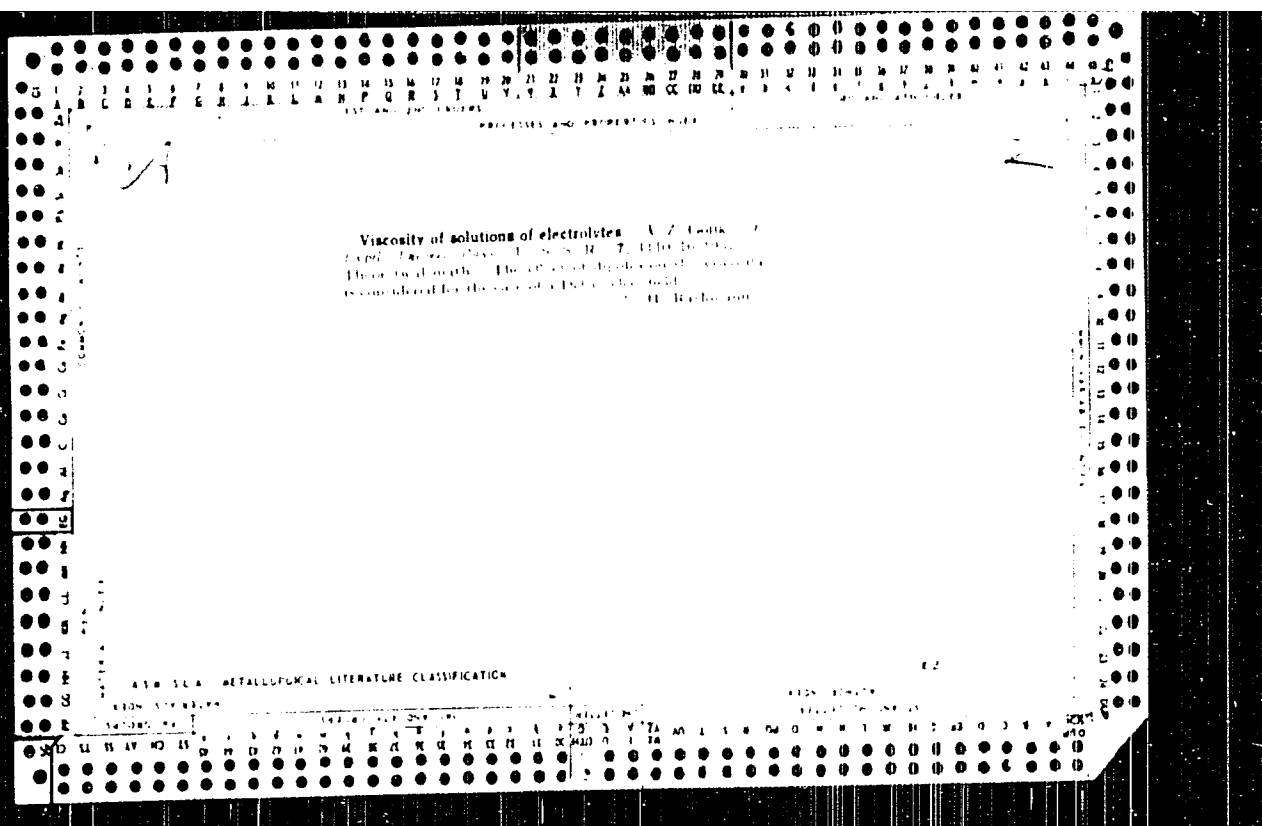
Novocaine block of craniocervical sympathetic ganglion in
treating eye diseases. Veterinariia 40 no.10:42-44 O'63.
(MIRA 17:5)

1. Moskovskaya veterinarnaya akademiya.

TEST AND TENSILE PROPERTIES																									
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<p>CA GOLIK, A. B.</p> <p>The heat capacity and viscosity of liquids. A. Golik. <i>Bull. Acad. Sci. U. R. S. S., Ser. Phys.</i> 3, No. 1, 54-6 (1941); <i>Khim. Referat. Zhur.</i> 4, No. 9, 3-4(1941); cf. <i>C. A.</i> 34, 71814. On the basis of the Eyring theory, the temp. dependence of the heat capacity of a monatomic liquid is attributed to the temp. dependence of the factor b, which characterizes the structure of the liquid, to the temp. dependence of the energy of evap., or to both factors simultaneously. The viscosities of liquids having the same mol. and x-ray structures at a given temp. and pressure are in the same order as the other phys. properties (heat capacity, thermal cond., etc.). W. R. Henn</p>																									
<p>ASA S. A. METALLURGICAL LITERATURE CLASSIFICATION</p>																									

Golik, A. Ye.

The viscosity and structure of liquid solutions of zinc, cadmium, tin, bismuth, and lead in mercury. A. Ye. Golik and N. A. Radtsig (T. G. Shevchenko State Univ., Kiev, Ukrain. Fiz. Zhur., 1, 172-81 [Russian summary], 187-11 (1956)). The viscosity coeff. was measured by a method proposed earlier (Golik, *et al.*, *Ukrain. Khim. Zhur.* 17, 627 (1951)), and was improved by protecting the amalgam against oxidation in the viscometer by application of oil coats. of an acid. The η s were measured in a pycometer. The η s decrease almost linearly with rising temp. The curves of the viscosity as a function of temp. between 300 and 900°K. of all these solns. lie between the curves of the components. The following compositions wt. % result in identical viscosity curves: 8.3 Cd or 11.7 Zn, 11.0 Cd or 4.3 Zn, 30.0 Cd or 8.0 Zn. The activation energies for viscous flow were a linear function of the concn. Only the viscosity curve of Pb in Hg shows a distinct min., owing to their different structures; the viscosity curves for Sn, Pb, and Bi amalgams are more complicated than the ones for Zn and Cd. The results for the last 2 alloys can be interpreted by considering the potential-energy curves for Zn and Cd in Hg. The lower the min. in these curves, the higher the binding energy, the higher the crit. temp. of the metal under consideration, and the higher its viscosity. As the viscosity-temp. curve of the alloy lies between the ones for the components, the potential curves for Zn and Cd in Hg must lie between the ones of the components too, and the depth of the min. there (also of the bond energy, crit. temp., and viscosity) depends on the concn. of Zn or Cd, resp. These data are evidence that there is a relation between the viscosity and the structure of the mol. field of liquids. 10 references. Werner, Landstein.



1ST AND 2ND COLUMNS		PROCESSING AND PREPARED BY		RECORDING UNIT	
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1ST AND 2ND GROUPS

PROCESSES AND PROPERTIES INDEX

2

cf

Critical point. A. Z. Golik. Uspekhi Fiz. Nauk 23, 67-73 (1940).—The scattering of x-rays by, the Raman spectra of, and the change of d. of substances at temps. near their crit. temps. are discussed and illustrated by exptl. data for water, ethylene, ether and isopentane. F. H. Rathmann

ASTM-15A METALLURGICAL LITERATURE CLASSIFICATION

REGIONAL SYMBOLS

SYMBOLS FOR CRYSTAL STRUCTURE

SYMBOLS FOR CRYSTAL ORIENTATION

SYMBOLS FOR CRYSTAL DEFECTS

SYMBOLS FOR CRYSTAL GROWTH

SYMBOLS FOR CRYSTAL MECHANICAL PROPERTIES

SYMBOLS FOR CRYSTAL ELECTRICAL PROPERTIES

SYMBOLS FOR CRYSTAL THERMAL PROPERTIES

SYMBOLS FOR CRYSTAL OPTICAL PROPERTIES

SYMBOLS FOR CRYSTAL MAGNETIC PROPERTIES

SYMBOLS FOR CRYSTAL RADIATION PROPERTIES

SYMBOLS FOR CRYSTAL CHEMICAL PROPERTIES

SYMBOLS FOR CRYSTAL BIOLOGICAL PROPERTIES

SYMBOLS FOR CRYSTAL ACOUSTIC PROPERTIES

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SYMBOLS FOR CRYSTAL CHEMICAL PROPERTIES

SYMBOLS FOR CRYSTAL BIOLOGICAL PROPERTIES

SYMBOLS FOR CRYSTAL ACOUSTIC PROPERTIES

Golik, A. Z.

28/49T104

USSR/Metals
Alloys
Viscometers

Oct 48

"Readings of Gert-Type Instruments," A. Z. Golik,
Inst Phys Chem, Acad Sci Ukrainian SSR, 1 p

"Zavod Lab" Vol XIV, No 10

Discusses various characteristics of metal alloys
which can be detected by use of Gert-type viscom-
eters.

28/49T104

GOLIK, O.Z.; RAVIKOVICH, S.D.

Structure and viscosity of binary solutions and mixtures.

Dop. AN URSSR no.2:17-23 '49.

(MLRA 9:9)

1. Institut fizichnoi khimii im. L.V. Fisarzhavs'kogo AN URSSR.

Predstaviv diysniy chlen AN URSSR O.I. Brods'kiy.

(Viscosity) (Solution (Chemistry))

0100, A. 7.

0101, A. 8. - "1. The first of the two main types of the ...
channel, V. D. KIV, Term. 1, 200, p. 34-36, - 11-12: 1, 2-40.

01: 01-02, 10-12-13, (1-1-1) Internal Investigations, 10, 1, 10-12.

GOLIK, A. Z.

PA 48/49T30

USSR/Chemistry - Viscosity
Chemistry - Bonds

Jan 49

"A Study of the Coefficient of Viscosity in
Isomorphous Substances," A. Z. Golik, S. D.
Ravikovich, Inst of Physicochem iment L. V.
Pisarzhevskiy, Acad Sci, Ukrainian SSR, Kiev,
4 pp

"Zhur Fiz Kalm" Vol XXIII, No 1

Claims actual results can be achieved by analyzing
coefficients of viscosity of liquids which have
the same molecular structure and type of bond
between particles. Conducted experiments on

48/49T30

USSR/Chemistry - Viscosity (Contd)

Jan 49

following: paradichlorobenzene, paradi bromo-
benzene, naphthalene and anthracene. Gives
mathematical formulas, tables, and graphs of
experimental results. Submitted 23 Mar 48.

48/49T30

CA

2

Structure and viscosity of binary solutions and mixtures

A. Z. Golik and S. D. Ravikovich (Inst. Phys. Chem. Acad. Sci. Ukr. S.S.R.), *Doklady Akad. Nauk Ukrain. S.S.R.* 1980, 101 (in Ukrainian), cf. C. A. 44, 8721d. A relation is established between the viscosity η and the crit. temp. t_c of mixts. of org. compds. of the same type. In mixts. of $C_{12}H_{26}$ and $C_{14}H_{30}$, both η and t_c increase with the concn. of $C_{12}H_{26}$. Selected expl. data of t_c and of η (temp. in parentheses) in stokes, are: pure $C_{12}H_{26}$, $t_c = 234^\circ$, $\eta = 0.00460$, (80°) 0.00315, (150°) 0.00192; $C_{12}H_{26} + 11\%$ $C_{14}H_{30}$, $t_c = 256$, $\eta = 0.00551$, (44.5) 0.00447, (80.5) 0.00315; $C_{12}H_{26} + 49\%$ $C_{14}H_{30}$, $t_c = 267^\circ$, $\eta = 0.00580$, (68.5) 0.00400, (147.5) 0.00235; $C_{12}H_{26} + 60\%$

$C_{12}H_{26}$, $t_c = 274^\circ$, $\eta = 0.00650$, (75.0) 0.00397, (145.0) 0.00249, pure $C_{14}H_{30}$, $t_c = 296^\circ$, $\eta = 0.00785$, (75.0) 0.00521, (150.0) 0.00322. The compn. $C_{12}H_{26} + 49\%$ $C_{14}H_{30}$ has the same t_c as pure $C_{12}H_{26}$; correspondingly, η is the same for the $C_{12}H_{26} + C_{14}H_{30}$ mixt. and for pure $C_{12}H_{26}$ over the whole temp. range. For all compns., $\log \eta$ is a linear function of $(1/T)$, and the slope (activation energy) is the same for all compns. and for the pure components as well. Selected expl. data for mixts. of MeOH and BuOH are: pure MeOH, $t_c = 232^\circ$, $\eta = 0.00778$, (80) 0.00387, (100) 0.00210; MeOH + 33% BuOH, $t_c = 230$, $\eta = 0.00354$, (71.4) 0.00228, (110.6) 0.00154; MeOH + 55% BuOH, $t_c = 243$, $\eta = 0.01450$, (64.5) 0.00830, (102.0) 0.00476; MeOH + 66% BuOH, $t_c = 250$, $\eta = 0.01889$, (82.0) 0.00873, (118.0) 0.00432; MeOH + 83% BuOH, $t_c = 263$, $\eta = 0.02718$, (60.0) 0.01164, (113.4) 0.00550; BuOH, $t_c = 287$, $\eta = 0.03898$, (66.2) 0.01437, (130.0)

0.00948. Pure EtOH, $t_c = 243$, $\eta = 0.01361$, (80) 0.00611, (160) 0.00334; EtOH + 10% BuOH, $t_c = 255$, $\eta = 0.02107$, (62.5) 0.01019, (110.0) 0.00500; EtOH + 50% BuOH, $t_c = 269$, $\eta = 0.02905$, (65.0) 0.01293, (110.6) 0.00588; pure BuOH, $t_c = 287^\circ$, $\eta = 0.03803$, (66.2) 0.01437, (130.0) 0.00480. The parallelism between η and t_c repeats itself in these systems. With the aid of plots, it is found that pure EtOH has the same t_c and the same η (at any temp.) as a mixt. of the compn. 17% MeOH + BuOH or 32% EtOH + BuOH. Pure EtOH has the same t_c and η as a mixt. 45% MeOH + BuOH. In both MeOH + BuOH and EtOH + BuOH, $\log \eta$ is a linear function of $(1/T)$ but the activation energies vary with the compn. In the system EtOH + $C_{12}H_{26}$, representative of a mixt. of components of unlike type, selected data are: EtOH + 18% $C_{12}H_{26}$, $t_c = 248$, $\eta = 0.01062$, (78.9) 0.00470, (131.7) 0.00286; EtOH + 39.5% $C_{12}H_{26}$, $t_c = 255$, $\eta = 0.00803$, (61.0) 0.00504, (132.1) 0.00273; EtOH + 66% $C_{12}H_{26}$, $t_c = 270$, $\eta = 0.00768$, (74.0) 0.00399, (146.0) 0.00270; pure $C_{12}H_{26}$, $t_c = 288$, $\eta = 0.00621$, (70.1) 0.00378, (130) 0.00209. The curves of η for the mixts. lie between those of the pure components, fanning out from a common high-temp. point of intersection.

N. Than

CA

Structure and viscosity of binary liquid mixtures and solutions. A. Z. Golik and S. D. Davidovich (Acad. Sci. Ukr. S.S.R., Kiev). *Zhur. Fiz. Khim.* 26, 521 (1950); cf. C.I. 42, 4064c.—In mixts. of similar liquids, kinematic viscosity ν increases with crit. temp. T_c . Naphthalene (I) has $T_c = 400^\circ$ and $\nu = 0.060, 0.401$, and 0.262 centistoke at $80, 235$, and 360° . PhPh has $T_c = 328^\circ$ and $\nu = 1.524, 0.579$, and 0.288 at $73.5, 167.5$, and 325° . A 25 mol. % soln. of PhPh in I has $T_c = 497^\circ$ and $\nu = 0.948$ and 0.380 at 90° and 235° . For 50% PhPh in I, $T_c = 512^\circ$, $\nu = 1.008$ and 0.374 at 80 and 245° . For 75% PhPh in I, $T_c = 530^\circ$, $\nu = 1.180$ and 0.381 at 80 and 235° . For PhCl, $T_c = 362.2^\circ$, $\nu = 0.657, 0.421$, and 0.261 at $18.4, 68$, and 146.5° . For PhBr $T_c = 397^\circ$, $\nu = 0.681, 0.418$, and 0.267 at $20, 72$, and 141.5° . For PhI $T_c = 448^\circ$, $\nu = 0.81, 0.46$, and 0.30 at $20, 80$, and 140° . The mixt. PhI 0.19, PhCl 0.81 mol. has $T_c = 397^\circ$, and its ν is almost identical with that of PhBr. For PhI 0.25, PhCl 0.75 and PhCl 0.25, PhI 0.75, T_c was 406 and 438° , resp., and ν was 0.696 at 18.3° and 0.707 at 19.9° , resp. When the 2 components are very different, the ν -temp. curves may intersect. This seems to be the case for PhH + EtOH. PhH has $T_c = 288.5^\circ$, $\nu = 0.621, 0.378$, and 0.269 at $20.4, 79.1$, and 190° . EtOH has $T_c = 243.1^\circ$, $\nu = 1.574, 0.634$, and 0.233 at $20, 80$, and 190° . The mixts. contg. 33.7, 60.5, and 82 mol. % EtOH have $T_c = 267, 255$, and 248° , and $\nu = 0.675$ at 20.5° , 0.803 at 22.4° , and 1.062 at 21.1° , resp. Many other values of ν are given at intermediate temps. Khatilov's capillary viscometer (*Zhur. Khim. i Teor.*, 1938) was used. J. J. Bikerman

GOLIK, A.Z.; RAVIKOVICH, S.D.; CRISHCHENKO, A.V.

Viscosity and molecular structure of solutions. Ukr.khim.zhur.17
no.5:627-657 '51. (MIRA 9:9)

1. Institut fizicheskoy khimii AN USSR.
(Solution (Chemistry)) (Viscosity)

GOLIK, A.Z.

USSR.

✓ Structure and viscosity of liquid metals and their solutions. A. Z. Golik. *Doklady Akad. Nauk Ukr. R.S.R.*

1952, No. 1, 16-20 (Russian summary 20-1); cf. C.A. 46, 821i. — The viscosity η of solns. of Zn and Cd in Hg (up to 20 wt. %) in the range of 15-140° is expressed by $\eta = A e^{B/RT}$, where A is a const. and B , the energy of activation of viscous flow, is related to the heat of vaporization L and the coordination no. Z by $L = cZB$; c is a const. The kinematic viscosity ν vs. temp. form a family of parallel lines with those of solns. of higher concn. and with components of higher crit. temp. above the others; the curves of solns. of 8.3, 11, and 20% Cd coincide with those of 3, 4.3, and 8.3% Zn, resp. From the straight lines of B vs. concn. for Cd and Zn solns. in Hg it is estd. that ν of 82% Zn in Hg is the same as that of pure Cd. I. Bencowitz

AA
21

GOLIK, A. Z.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

1. Connection between the physical properties and molecular structure of matter in the liquid state. A. Z. Golik. *Ukrain. Khim. Zhur.* 18, 451-8, 1962 (in Russian).
Math.-theoretical discussion of the liquid state in which general equations for latent heat of evapn., compressibility coeff., and viscosity coeff. are formulated in terms of crit. temp., d. and mol. vol. Generally, the higher the crit. temp., the greater is the latent heat of evapn. and the smaller is the compressibility coeff. but the greater is the viscosity coeff. Typical curves are shown. The treatment cited above refers to mols. with similar structures. G. M. K.

9-2-54
240

GOLIK, A. Z.

USSR/Physics - Solid State Physics

Nov 53

"Conference on the Liquid State of Matter, Held 22-30 May 1953 at Kiev by the Academy of Sciences, Ukrainian SSR, and Kiev State University in T. G. Shevchenko," S. D. Ravikovich, G. I. Foshchina and A. F. Skryshevskiy

Usp Fiz Nauk, Vol 51, No 3, pp 393-405

Summarize reports by the following: V. I. Danilov, on scattering of x-rays in liquids; A. F. Skryshevskiy, on x-ray study of solns of KOH, NaOH, LiOH, LiCl, and H_2SO_4 ; Ye. A. Foray-Koshits, on integral analysis of intensity curves; E. V. Deragin, Ye. G. Shvidkovskiy, C. Ye. Samoylov et al. on x-ray studies of liquid structure; A. Z. Golik, on characteristics of molecular structure of liquids; I. V. Radchenko, on modeling of liquids; P. K. Shestakovich, on new liquid models and influence of central and dipole forces on close ordering; A. Z. Golik and his associates S. D. Ravikovich, A. V. Orinchenko, V. I. Solenko, and N. A. Tyndich, on viscosity and density of matter in the liquid state; V. N. Chulanovskiy and D. B. Karenetskaya, on the influence of molecules' size and the intermolecular intensity on viscosity coeff; A. P. Bryzga, on thermodiffusion in binary systems; S. S. Prazovskiy, presence of grouping of identical atoms; A. R. Regel', on relation between electrical properties and structure of liquids; P. F. Yuka, on light-dispersion method for studying liquids' structure.

GOLIK, A.Z., doktor fiziko-matematicheskikh nauk, otvetstvennyy redaktor;
RAYIKOVICH, S.D., kandidat fiziko-matematicheskikh nauk, redaktor;
ROSHCHINA, G.P., kandidat fiziko-matematicheskikh nauk, redaktor;
SKRYSHEVSKIY, A.F., kandidat fiziko-matematicheskikh nauk, redaktor.

[Structure and physical properties of matter in liquid state;
papers of a conference held in Kiev, May 28-30, 1953] Stroenie i
fizicheskie svoistva veshchestva v zhidkom sostoianii; materialy
soveshchaniia, sostoiavshogosia v Kieve 28-30 maia 1953 g. [Kiev]
Izd-vo Kievskogo gos. univ. im. T.G.Shevchenko, 1954. 203 p.

(MLRA 9:8)

1. Akademiya nauk URSR, Kiev
(Liquids)

Golik A.Z.

Physical properties and the structure of alkali-halide
chloride solutions. A. Z. Golik and A. M. Dzhalilov. *Journal of
Chemical Physics*, 1976, 65, 138. (Russian)
summary, 335). The paper is devoted to the study of the critical
phenomena in the vicinity of the critical point. The temp.
relation of the critical viscosity coefficient, η_c , in the -10
and $+140^\circ$ interval. The critical viscosity coefficient is observed
within the whole temp. range up to the critical point. The
analysis of the experimental data together with some relation
curves at crit. temp. range indicates a close connection
between the crit. and other phenomena. The relation of
viscosity coeff. to temp. of salts in the critical range investi-
gated can be expressed by a simple exponential formula that
permitted a computation of the activation energy of viscous
flow. The latter coincides with the same direction as the crit.
temp. and serves as an additional source of information on the
internal interaction. The viscosity and other investi-
gation over a wide temp. range together with the data of the
crit. parameters of alk. hal. salts for easier equations
of the relation of the phys. properties of liquids and
their mol. structure, and extends them to salts of elec-
trolytes. W. M. Semak

Golik, A. Z.

X-ray investigation of propanol and butanol, A. Z. Golik,
A. P. Skryabovskii, and S. B. Pavlovskii, Doklady Akad.
Nauk USSR, 1954, 136-137 (Russian summary).
The intensity curves of the x-ray dispersion, and the func-
tions of the radial distribution of PrOH and BuOH were
detd. Both radial dispersion curves have 2 max. The
1st one corresponds to the least intermol. spacing, the 2nd
to the remaining intermol. spacing, and also to the OH spac-
ings of the neighbor mols. The possible structure
of PrOH and BuOH are discussed in the light of the radial
distribution functions obtained, and the conclusion is
reached that a plane mol. structure of these alcohols agrees
best with the results obtained. W. M. Spangberg

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MA

R. B. W. *[Signature]*

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66224
GOLIK, O.Z.; ORISHCHENKO, A.V.; ARTEMCHENKO, O.G.

"Negative" viscosity effect of nonaqueous solutions of potassium iodide.
Dep. AN URSR no. 6:453-456 '54. (MIRA 9:9)

1. Institut fizichnei khimii imeni L.V. Pisarzhevs'kogo AN URSR. Predstaviv
diysniy chlen AN URSR O.I. Breds'kiy.
(Potassium iodide)

Golik, A. Z.

USSR/ Physical Chemistry - Liquids and Amorphous Bodies. Gases. B-6

Abstr Jour : Referat Zhur - Khimiya, No 3, 1956, 7377

Author : Golik, A. Z., Skrishyevskiy, A. F., and Ravikovich, S. I.

Inst : Academy of Sciences Ukrainian SSR

Title : Radiographic Investigation of Methyl Alcohol

Orig Pub : Dopovidi AN URSR, 1954, No 6, 457-459 (published in Ukrainian with a Russian summary)

Abstract : The X-ray intensity curve and radial distribution function for methyl alcohol have been calculated. The radial distribution curve shows two peaks. The first peak corresponds to the intramolecular distance and the second is determined by the sum of the distances to the OH-groups neighbouring molecules. The first peak in the radial distribution curve was isolated from the large-distance side; this does not agree with the radial distribution curve which previously determined (G.G. Barway, J. Chem. Phys., 1938, 6, 3, 111).

Card 1/1

- 58 -

GOLIK, A. Z.

"Structure and Physical Properties of Matter in the Liquid State", a paper presented at the second conference on the Liquid State of Matter, Kiev, 30 May to June 1955, Usp. Fiz. Nauk, April 1955

GOLIK, A. Z.

"Nature of 'Negative' Viscosity of Electrolytic Solutions", a paper
presented at the Second conference on the Liquid State of Matter, Kiev, 30 May to
3 June 1955, Usp. Fiz. Nauk,, April 1955

GOLIK, A.Z.

17 Investigation of the latent heat of vaporization of liquids.
 18 Compensating microcalorimeter for the measurement of
 19 the latent heat of vaporization. A. Z. Golik, S. D. Ravi-
 20 kovich, V. P. Sokolov, and V. P. Shevchenko. Zh. Fiz. Khim.
 21 Shevchenko State Univ. (1963) 37 (1), 111-112 (T. 37, No. 1, 1963, 111-112) (Russian summary).
 22 Zh. R. S. R. 1963, No. 2, 168-70 (Russian summary).
 23 The calorimeter, having capillaries for the introduction of
 24 the solns. and the escape of the vapors and having a P-
 25 spiral heater, a thermocouple, and a stirrer, is placed in a
 26 Dewar flask through which H₂O from a thermostat is circu-
 27 lated. A fan stirs the air in the Dewar flask. The opposite
 28 end of the thermocouple is immersed in the thermostat so
 29 that the difference in the temp. is recorded. The vapors of
 30 8-10 ml. of the liquid is sufficient for a detn. A. Z. Golik,
 31 S. D. Ravi-kovich, Yu. I. Shiman'skiĭ, and V. B. Baranov'skiĭ. *Ibid.* 37:1-2 (Russian summary). The latent
 32 heat of evap. L was detd. at 20-60° for the following solns.:
 33 (a) MeOH and EtOH in H₂O; (b) PhBr and PhI in PhCl;
 34 and (c) C₆H₆ and C₆H₅ in C₆H₆. L of (a) and (b) is a
 35 linear function of the concn. C . When expressed in kcal./
 36 mol. L is higher for liquids of higher crit. temp. L (2, C.A.
 37 46, 3211; 48, 4911f); when expressed as cal./g. the inverse
 38 L vs. C passes through a min. at about 30% C₆H₆. L is
 39 higher for liquids with higher λ , regardless of its units.

Sm
 3

USSR: Atomic and Molecular Physics - Statistical Physics, Thermodynamics, D-3

Abst. Journal: Referat Zhur - Fizika, No 12, 1956, 34364

Author: Golik, O. I., Ruvikovich, S. D., Shimana'kiy, Yu. I., Baranovs'kiy, V. Ye.

Institution: Institute of Physical Chemistry, Kiev State University

Title: Investigation of Latent Heat of Evaporation of Liquids. II. Investigation of Physical Solutions

Original Periodical: Dopovidi AN URSR, 1955, No 3, 271-273; Ukrainian; Russian
resume

Abstract: It is shown that the temperature-dependence curves of latent heats of evaporation of solutions of methyl and ethyl alcohols in butyl alcohol, and of toluene and chlorobenzene in bromobenzene, lie between the corresponding curves of the components and range in an order determined by the critical temperatures of the liquids. The concentration dependence of the heat of evaporation of solutions of alcohol and halogen derivatives of benzene is linear, and a pronounced minimum is disclosed for the C_6H_{14} and C_6H_{16} and C_6H_{18} solutions.

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- 1 -

GOLIK, A. Z.

✓ Physical properties of substances in the liquid state and
Mendeleev's law. A. Z. Golik (T. G. Shevchenko State
Univ., Kiev). *Dokl. Akad. Nauk Ukr. R.S.S.R.* 1985,
No. 4, 349-52 (Russian summary, 352-5); cf. C.A. 48,
4011c.—The coeffs. of viscosity η and compressibility σ and
the latent heat of evap. L of elements of the same type of
crystal lattice and similar mol. bonds are functions of the
crit. temp. and the depth and the wall steepness of the
potential well detg. the reaction between the mols. The
greater the depth and the steeper the sides, the higher are
 η and L and the lower is σ . These facts assume a regularity
in accordance with Mendeleev's periodic law. I. B.

GOLIK, A. Z.

Effect of "negative" viscosity of solution of potassium iodide in binary mixtures of alcohols. A. Z. Golik, A. G. Orishchenko, and O. G. Artemenko (State Univ. of Kiev, Dep. of Chem., Nank. Univ., U.S.S.R., 1988, No. 5, 215-218 (Russian summary); cf. *ibid.* 461 (1984)). The d. and viscosity of KI soln. in binary mixts. of EtOH, BuOH, Glycerol and glycerol were detd. at 25-60°. The curves of η vs. vol. % KI for different concns. of BuOH: glycerol at 25, 40, and 60° are discussed; η and η_{sp}/c are the kinematic viscosities of the soln. and solvent, resp.). The neg. effect (η_{sp}/c) increases with the glycerol concn. and is higher with glycerol than with the lower alcs.; it decreases with the temp. It is thus possible to obtain a continuous transition from a neg. effect to its max. by changing the concn. of the solvent. Neg. viscosity is ascribed to the reaction of the ions of the solute with the solvent. L. Hucenine

Chem

2000

8/11/88

GOLIK, A.Z.

Structure and properties of matter in the liquid state. Trudy
Inst.fiz.AN URSS no.6:70-82 '55. (MLRA 9:8)
(Liquids) (Matter--Properties)

501 A.2.
USSR/Physical Chemistry - Liquids and Amorphous Substances.
Gases.

B-6

Abs Jour : Referat Zhur - Khimiya, No 6, 25 March 1957, 18390

Author : Golik, A.Z.

Inst : RZhKhim, 1956, 18694

Title : About Certain Problems Referring to the Theory of Liquid State.

Orig Pub : Nauk. zap. Kiivsk un-t, 1955, 13, No 7, 145-152

Abstract : Connection between the structure of a liquid and its properties is qualitatively analyzed. The attention is called to the fact that substances having the same lattice in solid state and the same intermolecular interaction are characterized by a family of similar curves upon the diagrams property-temperature. This is tied up with the fact that the energy of molecules of a liquid, in first approximation, is determined by the close order: the reciprocal action between different molecules and their

Card 1/2

- 130 -

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Gases, B-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60900

Author: Gellik, A. Z.

Institution: None

Title: Molecular Structure and Viscosity of Liquid Metals and Alloys

Original

Periodical: Nauk. zap. Kiivsk. un-tu, 1955, 14, No 8, 159-169

Abstract: As a result of considerations of the question concerning the relationship between molecular structure of liquid metals and their physical properties the author reaches the conclusion that the coefficient of viscosity of liquid metals and metal alloys depends on the molecular structure of the given liquid. For the study of this correlation it is appropriate to classify liquid metals as well as other liquids on the basis of identical molecular structure. Within a given group of liquids of identical molecular structure the temperature dependence curve of the viscosity coefficient is located higher with increasing value of the critical temperature

Card 1/2

USSR/Physical Chemistry - Liquids and Amorphous Bodies. Glass. B-6

Abst Journal: Referat Zhur - Khimiya, No 19, 1956, 60966

Abstract: of a given substance. The temperature dependence curve of the viscosity of a molecular miscible solution the components of which have the same molecular structure is located between the curves of the components and its location is higher with increasing boiling temperature (critical temperature) of the solution. If the critical temperature of pure liquids or solutions of the same type is the same the viscosity coefficients of such substances will be equal at any temperature. Thus coincidence of temperature dependence curves of viscosity coefficient constitutes an index of identical molecular structure of the liquids.

Card 2/2

GOLIK, A. Z.

USSR/ Chemistry - Physical chemistry

Card 1/2 Pub. 116 - 7/25

Authors : Golik, A. Z., and Ravikovich, S. D.

Title : Viscosity and structure of normal paraffins and their solutions in liquid state

Periodical : Ukr. khim. zhur. 21/1, 39-47, 1955

Abstract : The viscosity coefficient of pure paraffins and their binary and ternary solutions was investigated in connection with the molecular structure. It was found that paraffin molecules do not possess dipole moments, consequently, the reaction between them is determined by weak residual dispersion forces. Normal paraffins were observed to form a group characterized by an analogous function of atom orientation and identical type of intermolecular bond. The activation energy of the viscous flow of paraffin solutions was established to be a square

Institution : Acad. of Sc. Ukr-SSR, The L.V. Pisarzhevskiy Inst. of Phys. Chem.

Submitted : January 29, 1954

Periodical : Ukr. khim. zhur. 21/1, 39-47, 1955

Card 2/2 : Pub. 116 - 7/25

Abstract : function of the concentration. Solutions and pure paraffins have shown an identical viscosity coefficient at all temperature intervals of the liquid phase. Six references : 5 USSR and 1 USA (1939-1949). Tables; graphs; drawings.

Golik, A. Z.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 116 - 5/24

Authors : Golik, A. Z.; Ravikovich, S. D.; and Orishchenko, A. V.

Title : Viscosity and molecular structure of normal alcohols and their solutions

Periodical : Ukr. khim. zhur. 21/2, 167-175, 1955

Abstract : Data are presented on the density, viscosity and critical temperatures of normal alcohols and their solutions in connection with the molecular structure. It is shown that the activation energy of the viscous flow and the pre-exponential multiple factor are the functions of concentration; the activation energy increases and the pre-exponential multiple factor decreases with the increase in concentration of the component which possesses a higher critical temperature. Data regarding the critical temperatures and viscosity of binary and ternary alcohol solutions are included. Eight USSR references (1937-1952). Tables; graphs; drawing.

Institution : Acad. of Sc., Ukr. SSR, The L. V. Pisarzhevskiy Inst. of Phys. Chem.

Submitted : January 29, 1954

Golik, A. Z.

USSR/ Chemistry - Physical chemistry

Card 1/1 Pub. 116 - 7/30

Authors : Golik, A. Z.; Orishchenko, A. V.; Ravikovich, S. D.; Solenko, V. P.;
Roshchina, G. P.; and Shimanskiy, Yu. I.

Title : Viscosity, density and critical temperatures of alcohol solutions in
monocarboxylic acids

Periodical : Ukr. khim. zhur. 21/3, 318-326, June 1955

Abstract : The viscosity, density and critical temperatures of alcohol solutions were
investigated in monocarboxylic acids in which the chemical esterification
reaction usually takes place. The general laws governing the concentration
and thermal dependence of the characteristics mentioned and the laws govern-
ing the activation energy of the viscous flow and specific volumes were es-
tablished. It is shown that in the case of solutions, the components of
which react intensively between themselves, and that the concentration and
thermal dependences are also subject to other more complicated laws. Nine
Russian and USSR references (1877-1955). Graphs.

Institution : Acad. of Sc., Ukr. SSR., The L. V. Pisarzhevskiy Inst. of Phys. Chem. and
the T. G. Shevchenko State Univ., Kiev

Submitted : December 16, 1954

GOLIK, A. Z.

✓ Viscosities and critical temperatures of aqueous solu-
tions of alcohols and monocarboxylic acids. A. Z. Golik,
A. V. Orishchenko, S. D. Raykov, M. P. Kisilichina,
V. P. Solomko, and Yu. I. Shimanuk (T. G. Shevchenko
State Univ., Kiev). *Ukrain. Khim. Zash.* 21, 180-3
(1955) (in Russian); cf. C.A. 48, 4011c. Crit. temp. varies
linearly with percentage of H₂O for EtOH, PrOH, and HOAc
solns. For PrCO₂H solns. there is a min. at 25% H₂O.
Viscosity-concn. curves show max. that decrease with rising
temps. as H-bonded structures are broken down. Graphs
are given. Graphs are also given for A and B/R in the
equation $\text{viscosity} = A \exp(B/RT)$ against percentage
H₂O. B/R has a max. and A a min. John H. Scott

GOLIK A Z

8000

Viscosity and critical-temperature determinations of ternary solutions of alcohols-acids-water. A. Z. Golik, A. V. Orishchenko, S. D. Ravikovich, V. P. Solomko, and Yu. I. Shumanskiy (F. G. Shevchenko State Univ., Kiev). *Ukrain. Khim. Zhur.* 21, 576-84 (1955) (Russian); cf. C.A. 50, 4592c.—The viscosity and crit. temps. of water, EtOH, PrOH, AcOH, and butyric acid were studied. The viscosity isotherms in each system intersect in such a way that up to one concn. one isotherm lies above the other two, and at higher concn. is located below. At a given temp., different concns. of the same components have the same viscosities. The no. of such solns. reaches 5 for the water-butyric acid-propanol system.

W. M. Sternberg

PM

18. Physical Chemistry, Solutions, Theory of Acids and Bases.

3-11

Abs Jour : Ref Zhur - Khimiya, No 7, 1957, 22478.

Author : A. A. Golik, N. A. Ryndich.

Inst : Not given

Inst : Not given
Title : Viscosity and structure of liquid solutions of Zinc, cadmium, tin, bismuth and lead in mercury.

Orig Pub : Ukr Fiz. Zh 1956, I, No 2, 170-182 (ukr., resp. russ).

Abstract : Viscosity (η) and density (d) of binary liquid solutions of Zinc (I), Cadmium (II), Tin (III), Bismuth (IV) and Lead (V) in mercury (VI) are studied. Solutions I and II in VI, the components of which have a similar molecular structure belong to the number of molecular-mixing solutions. The curves of temperature dependence of η of the above mentioned solutions lie between curves of the components and grow higher with the increase in concentration of I or II, i.e. with the rise of the critical temperature of the solution. For series of solutions I and II in III, the curve of temperature dependence of η coincided with the whole studied temperature range. Solutions with identical d were also obtained. But η of these solutions is as different as is d in isoviscous solutions.

Card 1/2

-158-

... - Khazim, No 7, 1957
derivations and
concentrations
III

21-5-8/26
AUTHORS: Roshchina, G.F. (Roshchyna, H.P.), Golik, A.Z. (Holvk, O.Z.)
TITLE: Molecular Scattering of Light in Isoviscous Liquids (Molekulyarnoye rasseyaniye sveta v izov'yazkostnykh zhidkostyakh)
PERIODICAL: Dopovidi Akademii Nauk Ukraini'koi RSR, 1957, Nr 5, pp. 457-460 (USSR)
ABSTRACT: The authors investigated molecular scattering of light in isoviscous liquid in order to ascertain the connection between the characteristics of scattered light and the structure of the solutions. Isoviscous liquids were first discovered by one of the authors, A.Z. Golik (Ref.1). These liquids have equal critical temperatures and similar curves for the temperature dependence of viscosity. The investigation of the structure of these liquids with the aid of X-ray scattering shows that they possess the same structure. The liquids studied in this research were isoviscous solutions of n-paraffin and of n-alcohols. The following results were obtained with these liquids. In the case of n-paraffin solutions, isoviscous with n-heptane, there is a coincidence of the temperature-dependence curves of the intensity of the isotropic part of scattered light. For solutions, isoviscous with ethyl alcohol and propyl alcohol, such an agreement of the intensity curves is

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Molecular Scattering of Light in Isoviscous Liquids

21-5-8/26

not always observed. The intensities of the anisotropic parts of scattered light do not coincide for isoviscous liquids (except for heptane and an isoviscous solution of 50.6% of octane in hexane). On the basis of these investigations the coefficients were computed for the isothermal compressibility of isoviscous liquids. Isoviscous liquids were shown to have the same coefficients of isothermal compressibility. The article contains 2 figures, 2 tables and 4 Slavic references.

ASSOCIATION: Kiev State University (Kyivs'kyi derzhavnyi universytet)

PRESENTED: By V.Ye. Lashkarev (Lashkar'ov), Member of the AN Ukrainian SSR

SUBMITTED: 21 December 1956

AVAILABLE: Library of Congress

Card 2/2

60411 A 11

AUTHOR: V. I. Vukobratovich

TITLE: The structure of matter in the liquid state and Mendeleev's periodic law (Struktura i periodicheskiy zakon D.I. Mendeleeva).

PERIODICAL: Khimicheskii Zhurnal (Ukrainian Journal of Chemistry), No. 1, 1961, pp. 138-145 (USSR).

ABSTRACT: Papers showing that substances in the liquid state have a characteristic molecular structure are presented. The following physical properties are associated with the molecular structure: the viscosity, compressibility, the heat of vaporization, etc. When determining the dependence of the molecular structure and other properties of matter in the liquid state the intermolecular forces have to be taken into account. The dispersion of X-rays in the liquid state was investigated as well as the molecular dispersion of light, the density, viscosity, the heat of vaporization and the critical temperatures of various pure substances in solutions. The temperature-volume curves, temperature-heat-of-evaporation curves and temperature-compressibility curves were shown to have an analogous character (Diagram 1). Investigations by M.F. Vukobratovich.

19-1111

The expansion of matter in the liquid state and Mendeleev's Periodic Law. (Cont.)

I.I. Golitskiy and M.N. Dudakovskiy (3) showed that the curves of the thermal dependence of the expansion of liquid substances of these matters appear in a strictly defined sequence in the critical-temperature equilibrium of their solutions (and in particular cases) of a certain group of substances similar. The authors named these substances "isothermally similar substances" and listed some of them in Table 1. The points are that the density of these isothermally similar substances. These facts led the authors to correlate them with Mendeleev's Law. The molecular structure of liquids is not a considerable extent of the temperature. The authors suggest that it is possible to observe an apparent order in the temperature-viscosity curves when selecting substances of an analogous molecular structure and similar trends between the particles in the solid and liquid state. Elements in Group I, II and VII were investigated and data for the above curves are given diagrams really as well as

Cont 2/3

73-2-1/22

The structure of matter in the liquid state and Mendel-
ev's periodic law. (Cont.)

in tables. The author has proved that no empiric relation-
ship exists between the above mentioned properties. The
coefficient of viscosity was proved to be closely related
to the structure of the liquid and is defined by the con-
dition of order in the same.

There are 9 graphs, 3 tables and 10 references, of which
9 are Slavic.

ASSOCIATION: Kiev State University imeni T.G.Shevchenko.
(Kievskiy Gosudarstvennyy Universitet im. T.G.Shevchenko)

RECEIVED November 12, 1956.

AVAILABLE. Library of Congress

Card 3/3

GOLIK, A. Z.

20-1-55/10

AUTHORS: Golik, A. Z. , Karlikov, D. N.

TITLE: On the Relation Between the Coefficient of Viscosity and the Molecular Structure of Liquids (O svyazi koefitsiyent. vyazkosti so strukturey veshchestva v zhidkom sostoyanii)

PERIODICAL: Doklady Akademii Nauk SSSR, 1957, Vol. 114, No. 2, pp.300-302 (USSR)

ABSTRACT: The relationship between the coefficient of viscosity and other physical properties, and particularly the structure of the substance in its liquid state are of great interest both for the development of the theory of the liquid state and of the viscosity, but also for the practical aspects of physical-chemical analysis. However, this set of interrelationships has not yet been clarified. On the one hand, the knowledge of the structure of liquids required for this purpose is lacking, and on the other hand the physical properties of the structure of liquids have not been investigated in sufficient detail. The authors of the paper under review made the attempt to overcome the difficulties, which are encountered

Card 1/3

On the Relation Between the Coefficient of Viscosity and the Molecular Structure of Liquids

in clarifying the relationships between viscosity and structure etc., by an economical selection of the objects of their investigation. For this purpose, also other properties were studied that are in some relationship with the structure. The objects were selected from the point of view of the similarity of their molecular structures. The following properties were studied within a wide temperature range: density, heat of vaporization, molecular dispersion of light, and critical temperature. It was demonstrated that the curves of temperature dependence of the viscosity and of the heat of vaporization are placed the higher, and the curves of compression are placed the lower, the higher the critical temperature of the substance under consideration. It was also proved that the interrelationship between viscosity and other properties connected with the structure, on the one hand, and the critical temperature, on the other hand, is a consequence of the periodic law of Mendeleev. The analysis of the curves of atomic distribution of the isoviscous solutions, as well as the analysis of the curves of intensity, show complete coincidence. Therefore it follows that liquids with identical coefficients of viscosity (isoviscous liquids) also have

Card 2/3

On the Relation Between the Coefficient of Viscosity and the Molecular
Structure of Liquids

identical orders of proximity and identical structures. There
are 4 figures, 1 table, and 8 references, 8 of which are
Soviet.

ASSOCIATION: State University imeni T. G. Shevchenko, Kiev
(Kiyevskiy gosudarstvennyy universitet im. T. G. Shevchenko)
Krivoy Rog Pedagogical Institute
(Krivorozhskiy pedinstitut)

PRESENTED: November 12, 1956, by G. V. Kurdyumov, Member of the Academy

SUBMITTED: November 6, 1956

AVAILABLE: Library of Congress

Card 3/3

30V/21-57-2-21/28

AUTHORS: Golik, A.S., Ravikovich, S.E., Baranovskiy, V.Ye.

TITLE: The Investigation of Evaporation Heats of Solutions of Some Deuterium Compounds (Issledovaniye teplot ispareniya rastvorov nekotorykh deyterosoyedineniy)

PERIODICAL: Dopovidi Akademii nauk Ukrain's'koi RSR, 1958, Nr 2, pp 210-212 (USSR)

ABSTRACT: The authors investigated the evaporation heat of heavy water solutions in ordinary water and of deuterium-butanol in butanol. It is shown that in the first case the concentration dependence of the evaporation heat has a clear-cut maximum at 40°C, and in the second case it degenerates into an S-shaped curve. The regularities observed indicate the complicated nature of intermolecular interaction. Hence the authors draw the conclusion that the conception of an "ideal" solution as a standard pattern for comparing different solutions is not applicable.

Card 1/2

There are 2 graphs, and 7 references, 3 of which are Soviet, 2 English, 1 German and 1 American.

304/21-50-2-22/26
The Investigation of Evaporation Heats of Solutions of Some Deuterium
Compounds

ASSOCIATIONS: Kiyevskiy gosudarstvennyy universitet (Kiev State University)
Kiyevskiy meditsinskiy institut (Kiev Medical Institute)

PRESENTED: By Member of the AS UkrSSR, A. I. Irodskiy

SUBMITTED: May 9, 1957

NOTE: Russian title and Russian names of individuals and institu-
tions appearing in this article have been used in the trans-
literation.

Card 2/2

GOLIK, A.Z. [Holyk, O.Z.]; RYNDICH, N.A. [Ryndych, N.A.]; BABINKO, S.A.

Viscosity of a Sn - Bi system [with summary in English]. Ukr.
fiz. zhur. 3 no.3:365-369 My-Je '58. (MIRA 11:10)

1. Kiyevskiy gosudarstvennyy universitet.
(Systems (Chemistry)) (Viscosity)